



August 23, 2016

**VIA ELECTRONIC DELIVERY**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W., Room TW-B204  
Washington, D.C. 20554

**Re: Written *Ex Parte* Presentation  
ET Docket No. 13-49**

Dear Ms. Dortch:

EchoStar Technology LLC and Hughes Network Services, LLC (collectively “EchoStar”) submit this letter to follow up on EchoStar’s August 16, 2016 meeting with staff in the Federal Communications Commission (“FCC”) Office of Engineering & Technology (“OET”) regarding the above-referenced proceeding.

At the meeting, FCC’s OET staff asked several questions, which EchoStar provides answers in this written ex-parte letter.

- 1) *What is the peak power level of our products?*  
EchoStar produces several products that utilize the U-NII-3 band for Wi-Fi operation. The products range from 45mW to 855mW peak power.
- 2) *What is the power level we are certifying and operating our products?*  
EchoStar’s products operate at the peak power levels achieved during EMC testing to the extent that power varies with operation on specific channels, BWs, etc.
- 3) *What is the cost impact of meeting the more stringent mask from the 2014 First Report & Order?*  
A 5-10% per product cost increase would be necessary in order to achieve similar power levels of the less stringent mask adopted in the 2016 Memorandum Opinion & Order.
- 4) *What is the impact on the operations when using the more stringent mask?*  
The U-NII-3 in-band power reductions EchoStar’s products require with the more stringent mask will reduce range up to 73%. Our products are designed to provide wireless High-definition video to a home with one wireless router and up to four clients. Providing additional access points or creation of a mesh network with additional wireless routers or wireless repeaters to maintain reasonable range significantly increases the total cost of an installation.



Please direct any questions regarding this matter to the undersigned.

Respectfully Submitted,

*/s/ Jennifer Manner*

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